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ABSTRACT

This booklet lists the major nutrients, discusses the role each plays in the body, and lists some of the foods that each nutrient can be found in. An explanation of the relationship between nutrients and energy, how the body gets the nutrients it needs from the diet, and the nutrients needed from before birth until the later years is included. A food guide lists the four basic categories with the daily requirements of each. Nutritional labeling and the value of processed foods are also discussed. (PD)

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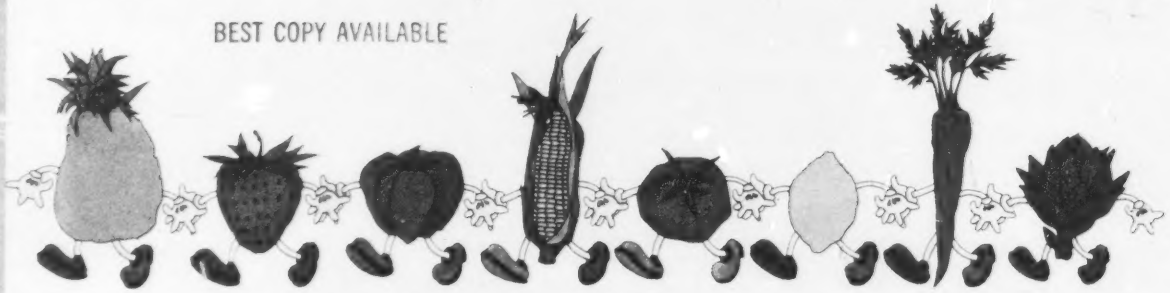

FOOD IS MORE THAN JUST SOMETHING TO EAT.

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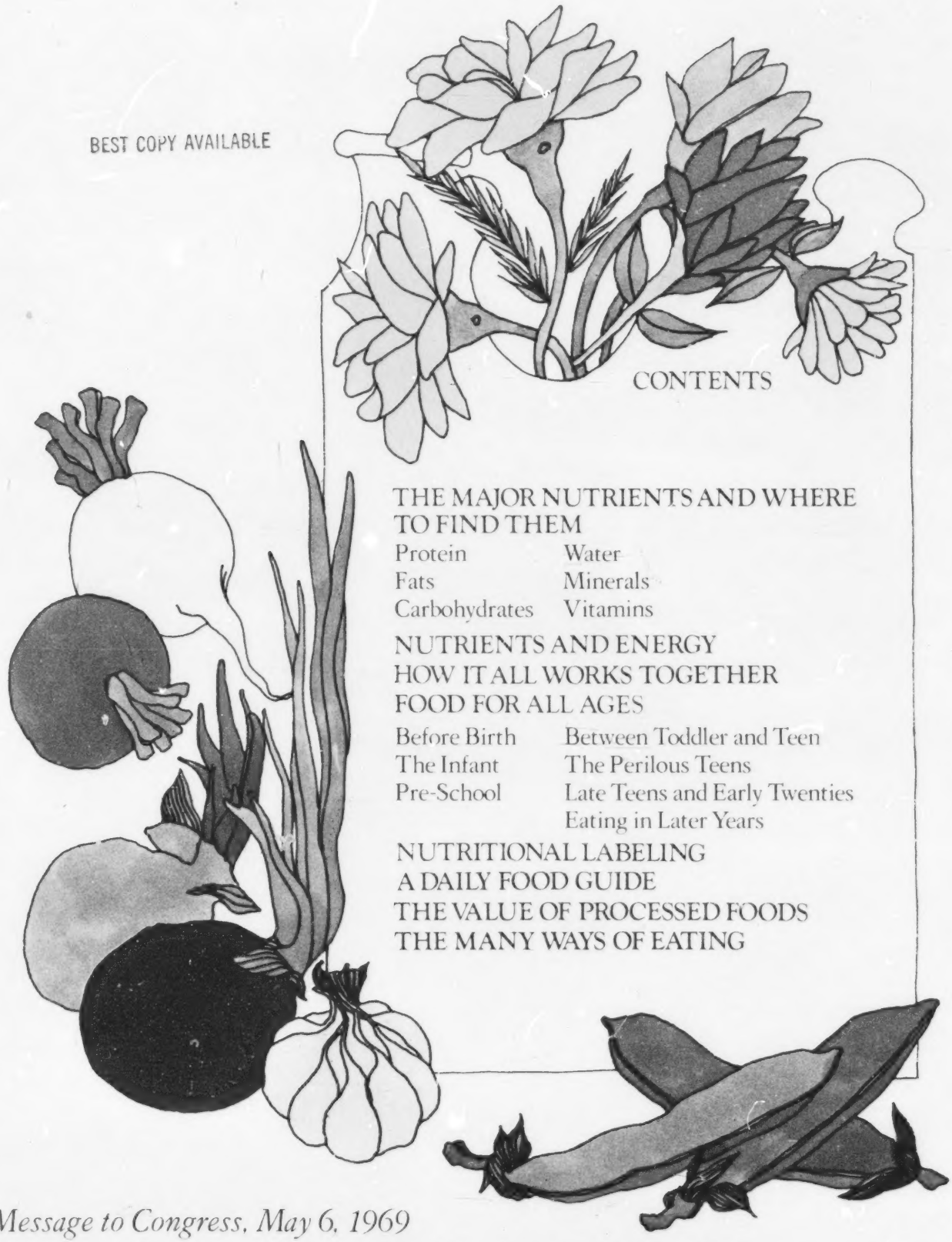

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NUTRITIONAL LABELING
A DAILY FOOD GUIDE
THE VALUE OF PROCESSED FOODS
THE MANY WAYS OF EATING

Message to Congress, May 6, 1969

"People must be educated in the choosing of proper foods. All of us... must be reminded that a proper diet is a basic determinant of good health."

Richard Nixon
President of the United States

FOOD IS MORE THAN JUST SOMETHING TO EAT

In this land of plenty millions of Americans aren't eating wisely. Not because they haven't enough to eat, but because they eat too many of the wrong things or too little of the right.

In short: *Food is what you eat, nutrition is how your body uses food.* And if you aren't eating foods to meet your body needs, you may be suffering from poor nutrition. Some of the damages caused by severe malnutrition may be irreversible.

Before you decide this booklet isn't meant for you, let us mention a few facts that may change your mind:

What a young girl eats today may have an effect on the kind of pregnancy she will have years from now.

What a pregnant mother eats may have an effect on her child's growth and development.

What a child eats affects the way he grows and develops.

What a person eats—as an infant, a child, or an adult—can affect the length and quality of his life.

This booklet can help you find out what is wrong with what you are eating as well as what is right. Read it. And if you still think it isn't meant for you, pass it along. With so many Americans eating unwisely, you're bound to know someone it can help.

We acknowledge with thanks the advice and counsel of an *ad hoc* panel of the Food and Nutrition Board of the National Academy of Sciences.

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Food is the basis of life.

It is the source of health and well-being, gives you the energy you need for every day living, affects your weight and height and even your strength to a great extent.

In other words, everything in life begins with food and there is much to the saying, "You are what you eat."

Food contains protein, carbohydrates, fats, vitamins, minerals and water. All of these are nutrients: that is, they nourish the body.

Since food is vital, you need to know about the nutritive content of foods, which ones are the best sources of the various nutrients, and how to combine them into a healthful, balanced diet.

There is a great deal of talk about one particular group of nutrients, vitamins. Vitamins are very important but you should know that vitamins do not create energy or build tissue—the substance of the body—by themselves.

Many of them are involved in the release of energy within the body and in the process of tissue-building.

Some of them control the ways the body handles food. There are a number of different vitamins and they are found in different foods in varying amounts.

So food contains nutrients, some more than others, and you need to know how to select the combinations of food that will give you the nutrients you need.

The important thing is to remember that no one food does everything and all foods have something to offer. A variety of different types of foods will provide all the nutrients most of us need.

THE MAJOR NUTRIENTS AND WHERE TO FIND THEM

PROTEIN.

After water and possibly fat, protein is the most plentiful substance in the body. The substances, called enzymes, which control the processes that keep the body working are made of protein. Protein is also part of the hemoglobin molecule in red blood cells that carries oxygen into the system.

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And the antibodies in the blood stream that fight off disease and infection are also protein. Another important use of protein in the body is to build the muscle tissue which holds the bone structure together and provides the strength to move and work. Most Americans get more than enough protein.

Where is protein found? Meat, poultry, fish, milk, cheese and eggs provide good quantities of it. Bread and cereal are also important sources.

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And such vegetables as soybeans, chickpeas, dry beans and peanuts are also good sources of protein. You do not have to load up on meat, poultry or eggs to get enough protein in your diet.

Combining cereal or vegetable foods with a little milk, cheese or other animal protein can provide good protein in your diet.

For example, eat cereal with milk, rice with fish, spaghetti and meat balls, or simply drink a glass of milk during a meal. All these combinations provide the high quality protein the body needs.

FATS.

Fats provide energy and add flavor and variety to foods. They make meals more satisfying. Fats carry vitamins A, D, E and K and are essential parts of the structure of the cells which make up the body's tissues.

Our body fat protects vital organs by providing a cushion around them.

Fats are plentiful in butter, margarine, shortening, salad oils, cream, most cheeses, mayonnaise, salad dressing, nuts and bacon.

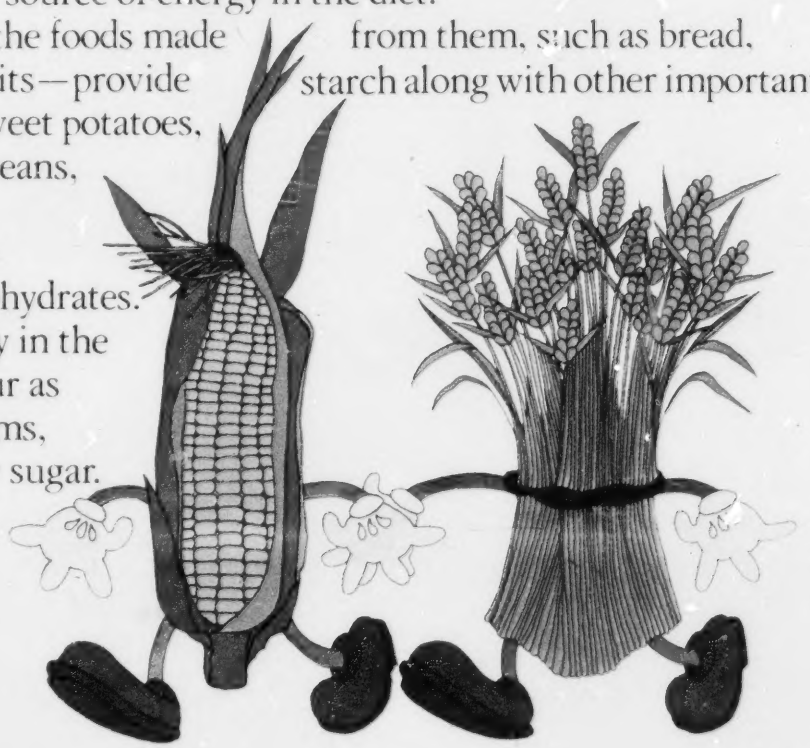
CARBOHYDRATES.

These are starches and sugars found in cereal grains, fruits, vegetables and sugar added to foods for sweetening.

Carbohydrates are the major source of energy in the diet. Wheat, oats, corn and rice—and the foods made from them, such as bread, spaghetti, macaroni, noodles or grits—provide starch along with other important nutrients. So, too, do potatoes, sweet potatoes, and vegetables such as peas, dry beans, peanuts and soybeans.

Most of the other vegetables contain smaller amounts of carbohydrates.

In vegetables they are usually in the form of starch; in fruits they occur as sugar. And, of course, candies, jams, molasses and syrups are primarily sugar.



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WATER.

Water is a most important nutrient.

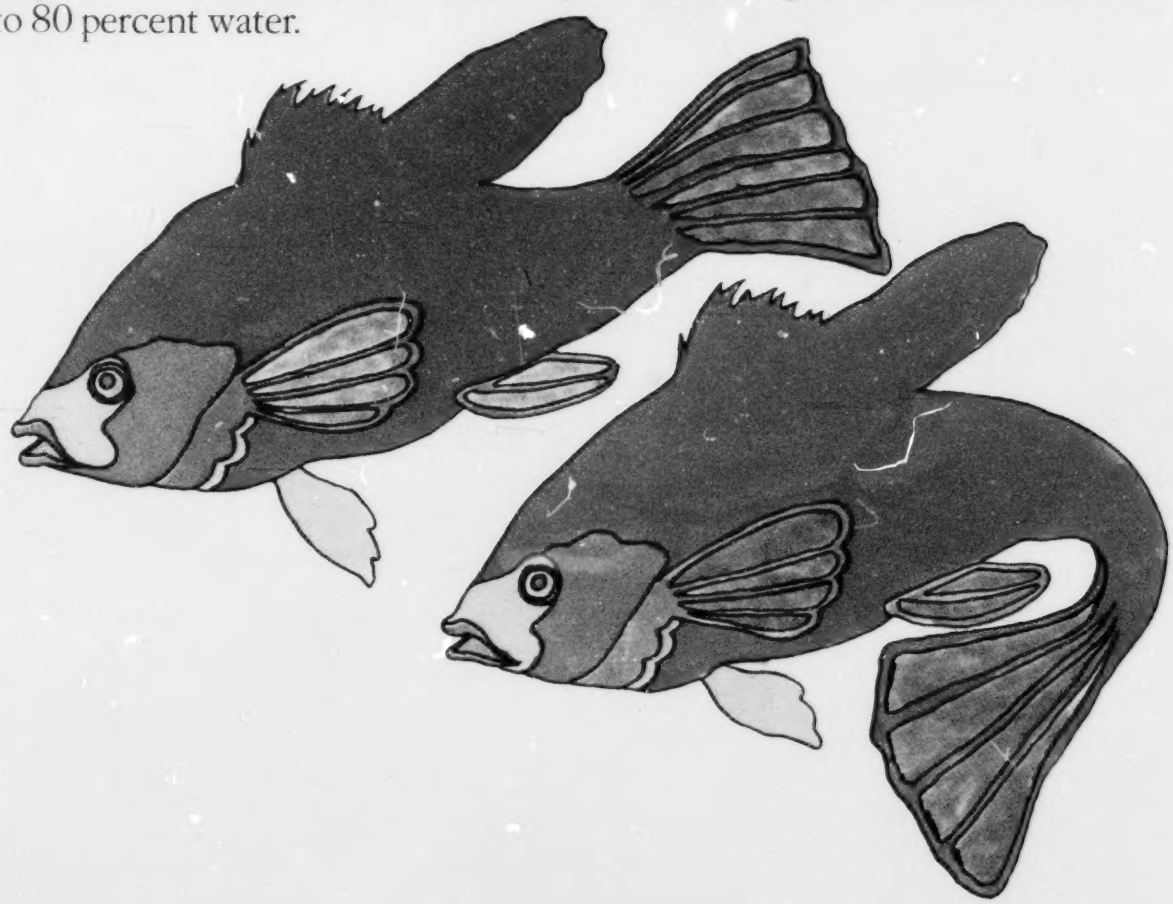
Water stands next to air in importance to life. You can get along for days, even weeks, without food but only a few days without water.

Water is necessary for all the processes of digestion.

Nutrients are dissolved in water so they may pass through the intestinal wall and into the blood stream for use throughout the body. Water carries waste out of the body and water also helps to regulate body temperature.

The body's most obvious source of water is the water a person drinks, but some is produced by the body's burning of food for energy. Coffee and tea are mostly water, and so are fruit juices and milk.

Soup is a water source and so are many fruits and vegetables. Even meat can be up to 80 percent water.



MINERALS.

The most abundant mineral in the body is calcium and, except for iron, it is the most likely to be inadequate in the diets of many age groups.

(From the age of 9, the diets of girls and women may lack as much as 25 to 30 percent of the calcium they need.)

Almost all calcium, and most phosphorus, which works closely with calcium in the body, is in bones and teeth.

The rest plays a vital role in tissue and body fluids. Soft tissue, or muscle, especially has a high phosphorus content. Calcium is required for blood to clot and for the heart to function normally. The nervous system does not work properly when calcium levels in the blood are below normal.

Most people who buy from the milk counter are stocking up on calcium supplies.

In the U.S. we rely on milk as a basic source of calcium, and two cups of milk, or an equivalent amount of cheese or other dairy products except butter, go a long way toward supplying all the calcium needed for the day.

But milk is not the only source. Dark green leafy vegetables like collards, mustard greens or turnip greens provide some calcium, and salmon and sardines supply useful amounts of it if the very tiny bones are eaten.

IRON.

Iron is another essential mineral. Women of child-bearing age require more iron than men. The diets of infants and pregnant women may need special attention to see that they contain the iron needed.

Unfortunately, only a few foods provide iron in very useful amounts. However, liver, heart, kidney and most lean meats are generously supplied with it. So are shellfish, particularly oysters. Whole grain and enriched breads and cereals can provide 20 to 25 percent or more of the daily iron need.

Dark green leafy vegetables are also sources of iron.

IODINE.

The most important fact about iodine is that a deficiency of it can cause goiter—a swelling of the thyroid gland. The most practical ways to be sure of getting enough iodine are to use iodized salt regularly and add sea food to the diet whenever possible.

OTHER ESSENTIAL ELEMENTS.

Calcium, iron and iodine are not the only minerals you need. Most of the others—zinc, copper, sodium, potassium, magnesium and phosphorus—are widely available in so many foods that a little variety in making your choice

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at the grocery store takes care of them easily. Magnesium, for example, abounds in nuts, whole grain products, dry beans and dark green vegetables.

Phosphorus shows up in the same foods that supply you with protein and calcium, although leafy vegetables contain little phosphorus.

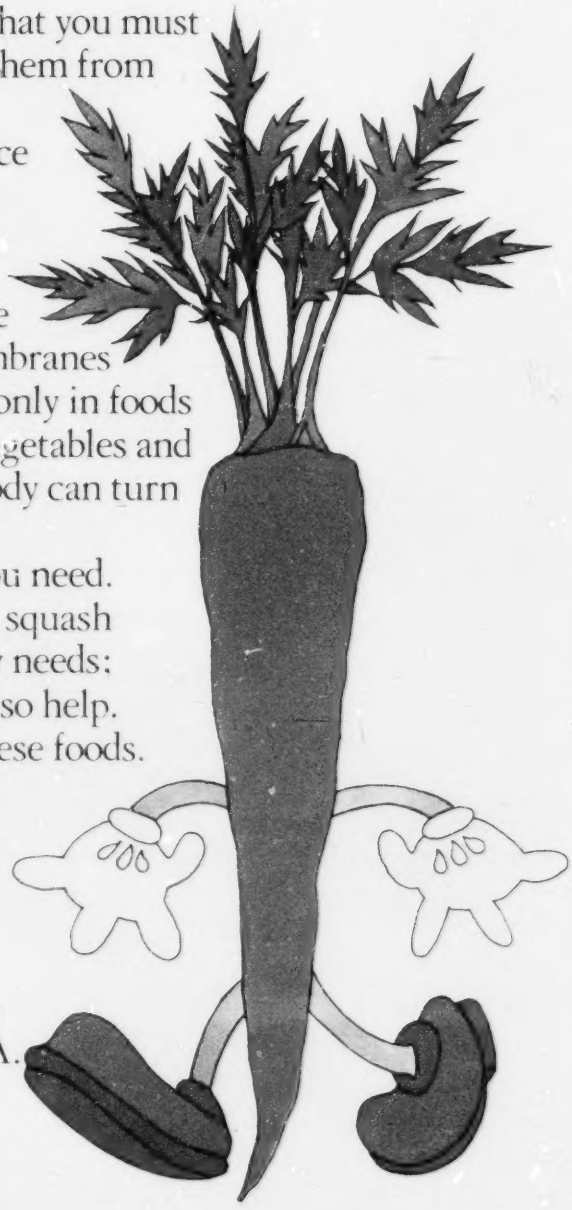
FLUORINE.

Fluorine—an element that helps protect teeth from decay—is not so readily found in food. Many metropolitan areas add minute amounts of fluorine to local sources of drinking water.

VITAMINS.

Scientists know of a dozen or more vitamins that you must have to enjoy good health. Ordinarily, you can get them from a well-chosen assortment of everyday foods.

A few of these vitamins are of great importance and you should know what foods provide them.



VITAMIN A.

This vitamin plays a very important role in eye function, and in keeping the skin and mucous membranes resistant to infection. Although vitamin A occurs only in foods of animal origin, the deep yellow and dark green vegetables and fruits supply a material—carotene—which your body can turn into vitamin A.

Produce can easily supply all the vitamin A you need. Such items as collards, turnip greens, kale, carrots, squash and sweet potatoes can more than take care of daily needs; yellow peaches, apricots, cantaloupe and papayas also help.

Many people, however, do not regularly eat these foods.

Liver is an outstanding source of vitamin A. A two-ounce serving of cooked beef liver provides more than 30,000 international units of the vitamin. That's six times more vitamin A than you would need during the day. Kidney is also an excellent source of vitamin A.

There are plenty of other sources of vitamin A. Whole milk is a source, but skim milk doesn't have any vitamin A unless it is fortified, that is, vitamin A has been added to it.

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Cheese made from whole milk, or margarine enriched with vitamin A, both supply this vitamin.

THE B VITAMINS.

Three of the best known vitamins—riboflavin, thiamin and niacin—release the energy in food. They also have a role in the nervous system, keep the digestive system working calmly, and help maintain a healthy skin.

Vitamin B_2 (riboflavin) is easy to find and extremely important to your diet. It is plentifully supplied by meats, milk, whole grain or enriched breads and cereals.

Organ meats (liver, kidney, etc.) also supply this vitamin.

A lack of thiamin (vitamin B_1) causes beriberi. Fortunately, this disease is now almost nonexistent in the U.S., although it is still seen in some alcoholics.

Thiamin is abundant in only a few foods. Lean pork is one. Dry beans and peas, some of the organ meats, and some nuts supply some thiamin.

Whole grain and enriched cereals and breads are also dependable sources of the vitamin. Niacin can be found in whole grain and enriched cereals, meat and meat products, and peas and beans.

Other B vitamins such as B_6, B_{12} and folacin are needed to maintain normal hemoglobin, the substance in blood which carries oxygen to the tissues. B_{12} occurs in foods of animal origin.

Strict vegetarians run a risk of developing the symptoms of B_{12} deficiency; these include soreness of the mouth and tongue, numbness and tingling in the hands and legs, anemia and loss of coordination.

Folacin is available in many foods but in small quantities.

VITAMIN C.

Vitamin C, ascorbic acid, is not completely understood, but it is considered important in helping to maintain the cementing material that holds body cells together.

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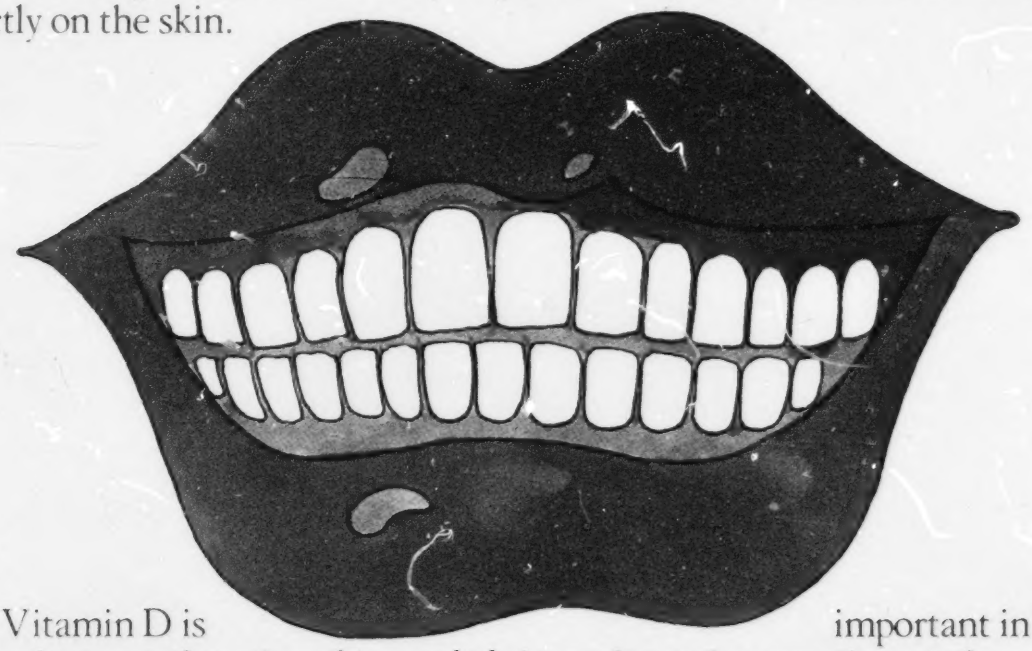
The citrus fruit juice you may have for breakfast can give you over half of the vitamin C needed for the day.

In fact unless good foods are consciously avoided, the rest of the fruit and vegetables eaten during the day will help to provide the vitamin C required.

Potatoes and sweet potatoes provide helpful amounts of vitamin C and so do tomatoes and peppers. In addition, the green vegetables such as broccoli, turnip greens, raw cabbage and collards make a contribution of vitamin C.

VITAMIN D.

Although few foods contain vitamin D, it is readily available in milk fortified with it. Sunlight enables the body to produce vitamin D if it has a chance to shine directly on the skin.



Vitamin D is important in building strong bones and teeth and is needed throughout the growth period.

Without it the body cannot absorb the calcium supplied by food and for this reason milk is often fortified with vitamin D. Adults rarely need more vitamin D than they get in food and from the sun, but infants and young children sometimes do not get enough. A disease called rickets results from a lack of vitamin D. Children who suffer from this disease have absorbed too little calcium, their bodies cannot form strong and rigid bones and consequently they may have enlarged joints, bowed legs, knock knees or beaded ribs.

On the other hand, too much vitamin D can be dangerous.

This causes a calcium overload in the blood and tissues. Infants given too much vitamin D may develop calcium deposits in the kidneys and other organs and end up with permanent kidney damage.

VITAMIN E.

Vitamin E is known to be essential but its exact role in the body is not fully understood. Vitamin E is abundant in vegetable oils and margarine and contained in such foods as wheat germ and lettuce.

If a diet regularly includes fruits, vegetables, vegetable oil, milk, meat and eggs, it is not lacking in vitamin E.

VITAMIN K.

Vitamin K is essential for the manufacture of a substance that helps blood to clot. Vitamin K is widely distributed in a variety of foods such as the green and leafy vegetables, tomatoes, cauliflower, egg yolks, soybean oil and any kind of liver.

NUTRIENTS AND ENERGY.

Almost all foods provide energy—some more than others.

This energy is measured in calories. Foods rich in fats, starches or sugars contain large amounts of calories—or energy.

Fat is the most concentrated source of energy. Ounce for ounce, it provides more than twice as much energy as protein or the carbohydrates.

Foods that contain a lot of water, like watermelon and cucumbers, have few calories because water, which makes up most of their weight, provides no calories and so no energy. When you eat a diet that furnishes more energy—or calories—than you need, the excess supply is stored in the body as fat.

And when you continue to overeat you become overweight or fat. When you eat less calories than the body uses, you lose weight.

HOW IT ALL WORKS TOGETHER.

The body can pick and choose what it needs from the nutrients in the diet, and see to it that each organ or part of the body gets exactly the right amount of nutrients —not more and not less. But, if the diet lacks some of the needed nutrients, the body has no way to get them.

The body keeps busy, working twenty-four hours a day, always building itself up, repairing itself, and discarding waste products.

It needs a constant supply of nutrients to do its job and when it receives the nutrients it applies them where they are needed. Let's take calcium as an example.

The body needs calcium to clot blood, to make the nerves and muscles function properly and to develop bones. If your body does not receive enough calcium to do its work from the food you eat, it steals some from your bones.

If the stolen calcium is not replaced the body is in trouble—though you may not

realize this fact for some years. (As much as one-third of the normal amount of calcium may be withdrawn from an adult's bones before the loss shows up on an X-ray film.)

It is not only what the nutrients do once the body gets them, it is what they do with each other that makes the difference in our health and well-being.

No single nutrient can function properly alone. It takes calcium to build strong bones but that is just the beginning.

Without vitamin D, the calcium is not absorbed from the intestines.

Protein is needed for the framework of the bone and to form part of every cell and all the fluids that circulate in and around the cells.

It takes vitamin C to help produce the materials between cells.

This is why nutritionists suggest eating appropriate quantities of a wide variety of foods—including milk products, meat or an alternate, fruits and vegetables, bread and cereals—in order to provide diets with all the needed nutrients.

The more varied your diet the better off you will be—tomorrow as well as today.

The foods you eat must sustain you for today and help build up your body for a lifetime.

FOOD FOR ALL AGES.

Regardless of age; everyone needs the same nutrients but often in different amounts. People doing hard physical labor need more energy than those who are less active. Women need more iron than men.

The six-footer needs more food than a little person; the steelworker more than the clerk. When a patient is on the mend from an illness, he may need more nutrients than when he is in good health.

One thing is certain: nutrition affects everyone from the day he is born, actually even before he is born.

Nutrients for the unborn child's growth and development come from the mother, which means that her diet during pregnancy is especially important.

While parents guide their children to good eating habits they might take a good look at their own food attitudes. If the food they don't like is never served, then the family will never get a chance to eat it regardless of how nutritious it might be.

Changing poor food habits is usually harder than starting out with good food habits, but it can be done.

The parents' example will teach children to eat foods that are not their favorites, usually without the children ever even thinking about it.

The more foods people learn to enjoy, particularly among the fruits and vegetables, the easier it will be for them to change their diets if it becomes necessary

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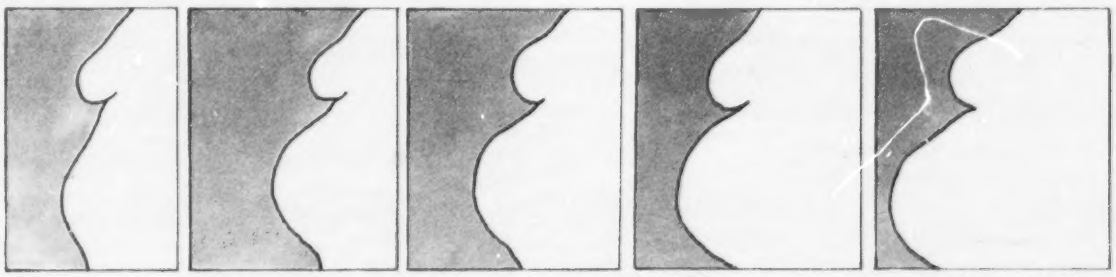
because of health problems, military service, foreign travel or some other reason.

Of course, somewhere along the road to a healthy old age, you learn that you must fit your diet to the amount of energy you use.

Regular exercise, like proper food, is a vital factor in continuing good health.

BEFORE BIRTH.

The woman who reaches child-bearing age well nourished and who maintains a good diet during pregnancy is more likely to have a healthy pregnancy and a healthy baby than the woman whose diet is poor.



But pregnancy can be a problem, particularly when expectant mothers are still teenagers. The body must cope with its own growth needs as well as the needs of the baby. A young girl—17 years or younger—who is in less than the best of health when she becomes pregnant, is borrowing trouble for herself and lending it to the child she carries.

And it is not just the poverty-stricken teenager who faces such problems.

Many a woman with enough money for a good diet copes with pregnancy in a state of semi-starvation because of the cult of slimness.

Pregnancy for an older woman can also be a hazard if her body stores of nutrients are already depleted by numerous pregnancies.

A woman who has always eaten well will not, ordinarily, have to make many changes in her diet because of pregnancy.

A daily diet during pregnancy should include at least two servings of lean meat, fish, poultry or eggs; four or more servings of vegetables and fruits including some which are good sources of iron, vitamin A and vitamin C; four servings of enriched or whole-grain breads or cereals and three or more cups of milk. Some of the milk and other foods such as margarine may be fortified with the vitamin D which is needed during pregnancy.

These foods provide the extra proteins, vitamins and minerals needed to maintain the expectant mother's body and for the baby's growth.

It may be hard to get all the iron and folic acid needed through food alone and the doctor will often prescribe a supplement to supply them.

Healthy women usually gain an average of 24 pounds during pregnancy.

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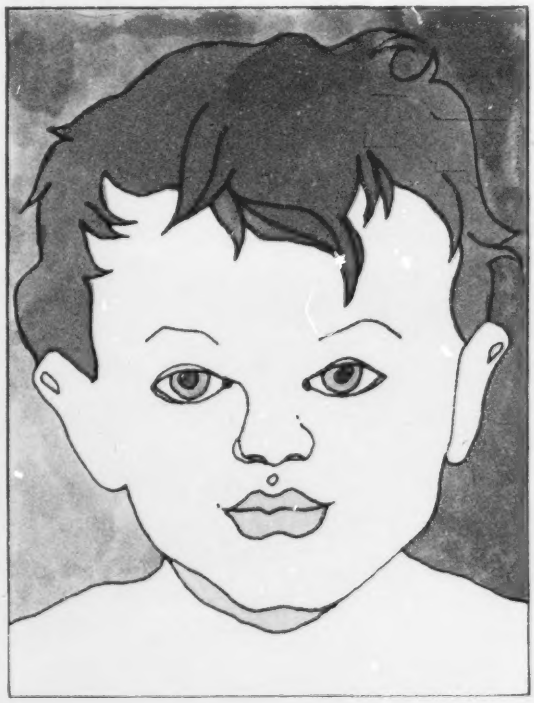
Pregnancy is certainly no time to try to lose weight; there will be time enough for that later. If a mother decides to nurse her baby, she should continue to include foods which will give her more protein, vitamins, minerals and calories.

A pint of milk and an egg added to a diet which was nutritionally adequate before pregnancy will provide all the additional protein and almost half of the vitamin A needed. Using milk as the source of extra protein also contributes to the mother's need for fluid when nursing.

The continued use of the green vegetables and fruits recommended for pregnancy will supply most of the other minerals and vitamins needed.

THE INFANT.

A child grows and develops more rapidly during the first few years of life than at any other time. Thus good nutrition is especially important. Feeding does more than nourish the infant's body, it also can help a child to establish warm human relationships with parents and other persons.



Milk is the baby's first food—milk either from the mother's breast or from a bottle. Since milk supplies a large proportion of the nutrients needed during the first two years of life, the choice of kind of milk or formula must be made with care.

Human milk is custom-made for the baby, is clean as it comes from the breast, can save a lot of work, and can be a satisfying experience for both mother and baby.

Human milk will ordinarily supply adequate amounts of all of the essential nutrients during the first few months of life with the exception of vitamin D, fluoride and iron.

If a commercially prepared infant formula, evaporated milk or homogenized whole milk is used, it will usually have vitamin D added to it. If not, then the baby will need to be given a vitamin D supplement.

The baby needs vitamin C early in life. Human milk and commercially prepared infant formulas usually provide adequate amounts of vitamin C.

If the baby is being fed evaporated milk or cow's milk formula, then vitamin C should be given in the form of drops. Otherwise a fresh, frozen or canned fruit juice that is naturally rich in vitamin C or fortified with vitamin C can be used.

A source of iron should also be added to the infant's diet early in infancy. Unless

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the baby is receiving iron-fortified formula, the doctor may suggest using an iron-fortified infant cereal or medicinal iron, beginning between 1-2 months of age.

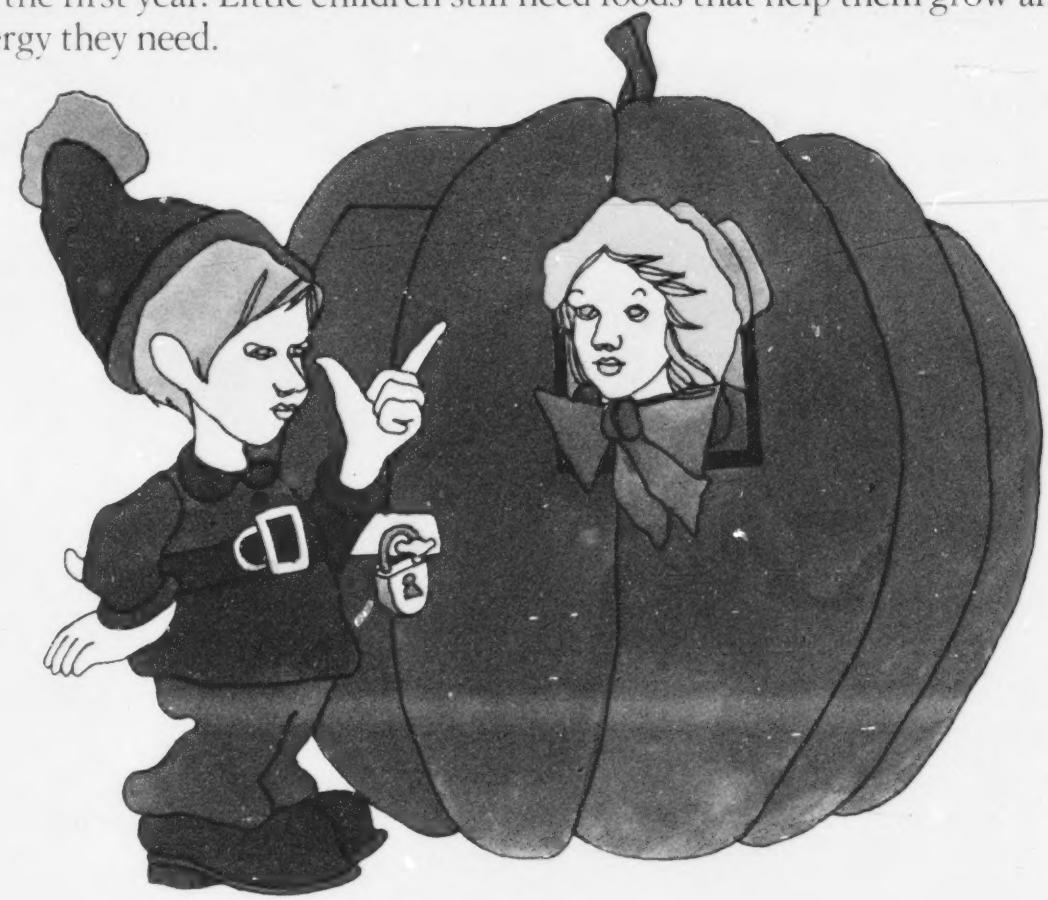
Whether or not a fluoride supplement is given to the infant will depend upon how much water the infant takes and the amount of fluoride in the water supply of the area.

Solid foods, such as cereals, strained fruits and vegetables, may be added by 1 to 3 months of age. Gradually other foods such as egg yolk, strained meat and fish are added. Be careful in choosing commercially available strained foods for baby; there are wide variations among them in the amount of calories and other essential nutrients.

By the time the baby is six months old, he or she will be receiving some "table food." When 7-9 months old, a baby is usually ready for foods of coarser consistency–chopped or junior foods. By then he or she will likely be on three meals a day with mid-morning and mid-afternoon snacks.

PRE-SCHOOL.

During the second and third years of life, the child grows much less rapidly than during the first year. Little children still need foods that help them grow and provide the energy they need.



The diet started in infancy should be continued with larger servings of meat, fish, and eggs, as well as fruits and vegetables, plenty of milk and whole grain cereals and bread. Children in this country often get less vitamin A than they need.

Parents need to try especially hard to include dark green and yellow vegetables such as broccoli, collards, kale, carrots, sweet potatoes and winter squash in children's meals. Butter and fortified margarine also supply generous amounts of vitamin A.

Children may be short of vitamin C, because they do not eat enough citrus fruits or juice, tomatoes, raw cabbage or other foods which are rich sources of that vitamin.

Fortified milk is a good source of vitamin D. The child who drinks less than one pint of milk a day may need a supplemental supply.

Preschool children may need snacks to tide them over to the next meal.

Some well chosen snacks are milk, small pieces of fruit, cut-up raw vegetables, cheese cubes, crackers spread with cottage cheese or peanut butter, and cereals.

Pick snacks that carry their weight in food value—don't let sweets become the rule.

Children should be served small-sized portions and come back for "seconds" if necessary. Some children get fat because they are taught to eat more than they need, even as infants. It is possible that the habit of overeating in infancy and early childhood may continue to obesity in later years.

BETWEEN TODDLER AND TEEN.

The elementary school child needs the same kind of foods the preschooler does, but, perhaps, larger servings.

Going to school, however, calls for a routine and a schedule. The preschool child can play for a while until he or she feels like breakfast. Not so the school child; there are carpools, buses and school bells to be coped with.

Going to school may be the beginning of the child's independence in choosing food. The child may need help in learning how to make wise choices.

If the elementary school child is getting too plump, take a good look at the amount of exercise he is getting and at what and how much he is eating.

THE PERILOUS TEENS.

There are two good reasons for concern about the food habits of teenagers. Teenagers are casting off the habits of childhood while still trying to find their own identities. As a result, good food habits may be lost for a while.

One out of every four mothers has her first child when she is less than 20 years old. The teenage appetite is often huge, but appetite alone is not enough to insure that the teenager will get all of the nutrients he or she needs.

During their teens, boys and girls grow at a faster rate than at any other time except in infancy. A boy's nutritional requirements during the time he is becoming a man are higher than at any other time in his life.

Those of a girl becoming a woman are exceeded only during pregnancy and lactation (the period following birth when the mother's breasts are manufacturing milk). So, a pregnant teenage girl has even greater nutrient needs.

A teenage boy may suddenly shoot up as much as four inches in height and gain 15 pounds in weight in a year.

A teenage girl's total gain is not usually so large, but it is considerable.

Growth involves more than increases in height and weight alone. Body fat is lost while bones increase in density and muscles develop in size and strength.

The endocrine glands—the glands that manufacture, or secrete, hormones, the chemical substances that control many body processes—are growing and developing.

The teen years are also a period of stress—physical and mental.

Teenage eating habits are often bad and the reasons are not hard to find: school, clubs and part-time jobs keep teenagers away from home at mealtime.

Their eating habits are being influenced by friends more than by parents.

They skip breakfast because they don't leave enough time for it. They choose snacks that are loaded with fats and sugar.

Teenage girls sometimes eat too little because they dread getting fat, whether they are overweight or not.

Diets have to be planned carefully for boys as well as girls. Both have such great need for protein, the B vitamins and vitamin C—and in fact every nutrient—that they cannot afford to fill up on foods that contribute empty calories alone.

A teenage boy usually winds up with a better diet than a teenage girl because his need for calories is so great that if food is available he will eat it.

Some boys, however, may neglect foods containing important nutrients.

A teenage girl's need for calories is considerably less. She is more likely to get enough vitamin C because of her liking for salads and fruits, but her protein and iron intake may be low.

Both boys and girls tend to neglect foods containing calcium, vitamin A, riboflavin, and iron. During the growth spurt, ample supplies of all the nutrients are needed for muscle, bone and blood.

The overweight teenager may eat the same kinds of foods as his average friend, but too much of them. Rich desserts and many of the usual snack foods could be replaced with fresh fruits and vegetables. Also, he may be less active.

Instead of a crash diet to take off pounds in a hurry, an overweight teenager should develop the well-balanced eating habits he needs for the rest of his life.

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The underweight adolescent may or may not be satisfied with his state and may need help in learning how to gain weight.

It should be noted that anemia may occur in both sexes at this age, although the monthly blood loss from menstruation puts girls in the more dangerous position.

Acne, the other blight on the teen years, is usually caused by hormone changes and not by diet.

LATE TEENS AND EARLY TWENTIES.

Growth ends somewhere during the later teens and early twenties when maturity is reached and the body's slowdown begins.

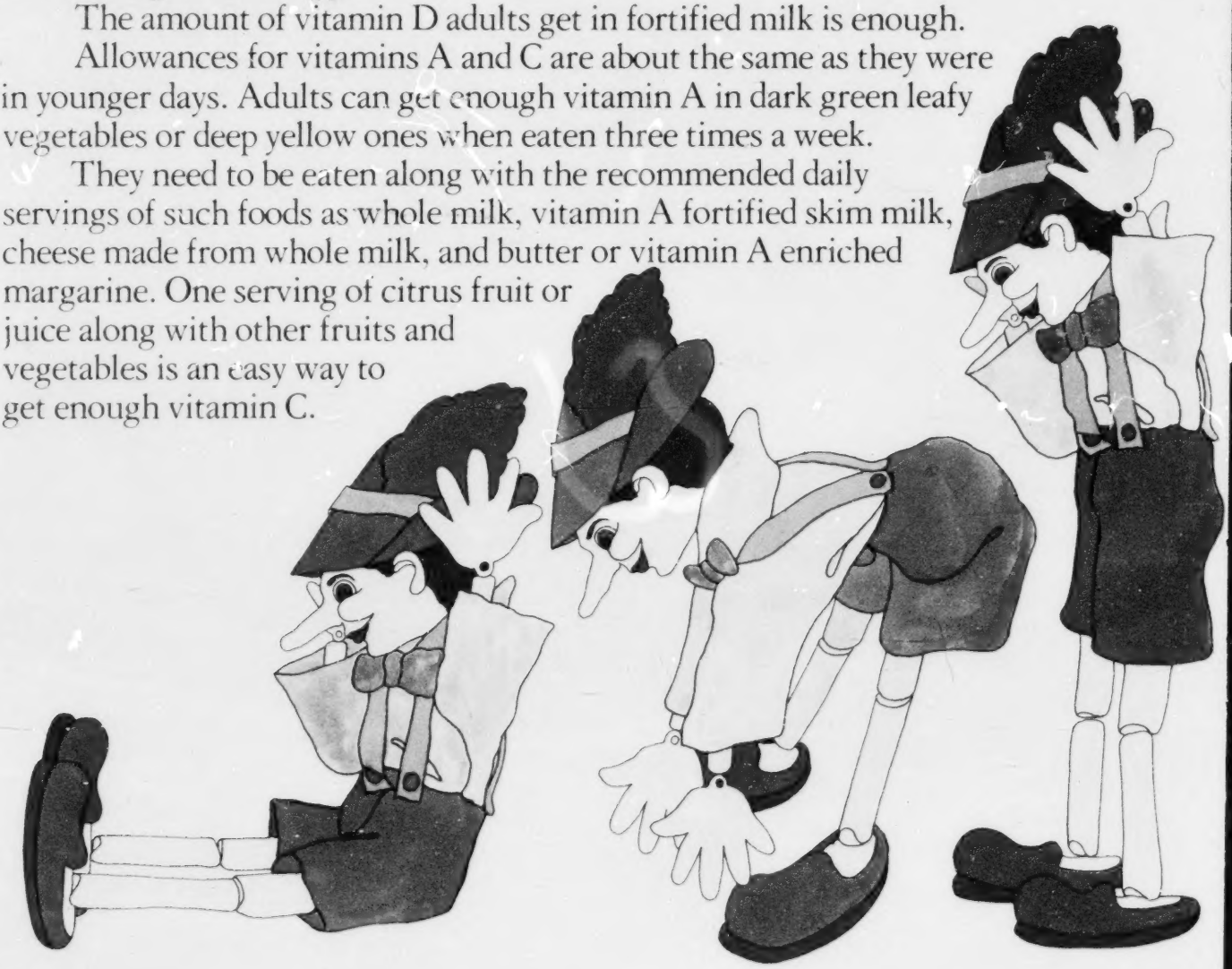
Compared with their youth, men and women need less protein and calcium—about two cups of milk a day provides enough calcium.

Men usually get enough iron without making a special effort. Women must be sure to get extra supplies in their diets.

The amount of vitamin D adults get in fortified milk is enough.

Allowances for vitamins A and C are about the same as they were in younger days. Adults can get enough vitamin A in dark green leafy vegetables or deep yellow ones when eaten three times a week.

They need to be eaten along with the recommended daily servings of such foods as whole milk, vitamin A fortified skim milk, cheese made from whole milk, and butter or vitamin A enriched margarine. One serving of citrus fruit or juice along with other fruits and vegetables is an easy way to get enough vitamin C.



Most adults use fewer calories than they did in their teens and weight control may be a problem.

Gross overweight usually means medical problems, so, generally, an adult should try to maintain for the rest of his life the weight considered normal for him at age 25. This means that the right amount of food at 30 may be too much at 40.

Calorie counting becomes necessary. A mere 20 extra calories a day could add two pounds of weight in a year.

What's two pounds? It's 80 extra pounds between the ages of 25 and 65!

Adults have some choice about which foods to limit. Such foods as pastries, cakes, salad dressings, gravies and nuts. if eaten frequently may supply too many calories for many people.

Frying may add fat no matter how well the food is drained.

Sugar, candies, syrup, jellies, soft drinks and alcohol add calories but few nutrients to the diet. Of course, cakes, dressings, jams and candy do make the diet more interesting, but when used, the extra calories should be compensated for by reducing portions of food. Foods such as meats, milk, fruits, vegetables and cereals or bread are necessary—the need for vitamins, minerals and protein continues even though calories are being reduced.

Be careful when you are counting calories. A diet that furnishes 1,500 calories a day could be lacking in some important nutrient, depending on the choices made.

The easiest way to bring the total nutrient value of a low-calorie diet up to standard is to be sure that each food does double duty.

For a mid-morning pickup, citrus fruit or juice supplies vitamin C along with calories while a soft drink gives you little more than calories.

By the same token, a plate of fresh fruit, instead of apple pie for dessert, can provide vitamins C and A in addition to calories.

EATING IN LATER YEARS.

The process of aging begins the moment a person is conceived.

It is hard to say exactly when youth becomes middle age, or middle age becomes old age. Calendars tell only part of the story.

Some men and women in their eighties are still going strong; some are feeble in their sixties. The cells of an older person's body undergo changes and some of the cells are damaged. The body's organs don't function as well.

Vision is not as clear, hearing is not as sharp, and the digestive systems may act up.

The older person's condition is affected by all the accidents, infections and other hazards of living that he has experienced during his lifetime.

This is when the results of a poor diet through the years can be seen.

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All the nutrients that have been supplied—or not supplied—are giving the cells more—or less—strength to fight the aging process and disease.

The food likes and dislikes developed over the years may become barriers to good nutrition. Older people need fewer calories.

Men and women 55 to 75 years old need 150 to 200 fewer calories per day than when they were 35 to 55. But like everyone else they need the right kinds of food to keep healthy and to provide enough energy; the same kinds younger people need but in different amounts.

Old age like the teen years is a time of learning to live with changes. Often the changes are serious and tiring.

The strains of old age may be made worse by changes in living patterns. The eating habits of the elderly can be influenced by loss of teeth, retirement, reduced income, moving out of a familiar house or neighborhood, or the number of people with whom they live.

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NUTRITIONAL LABELING

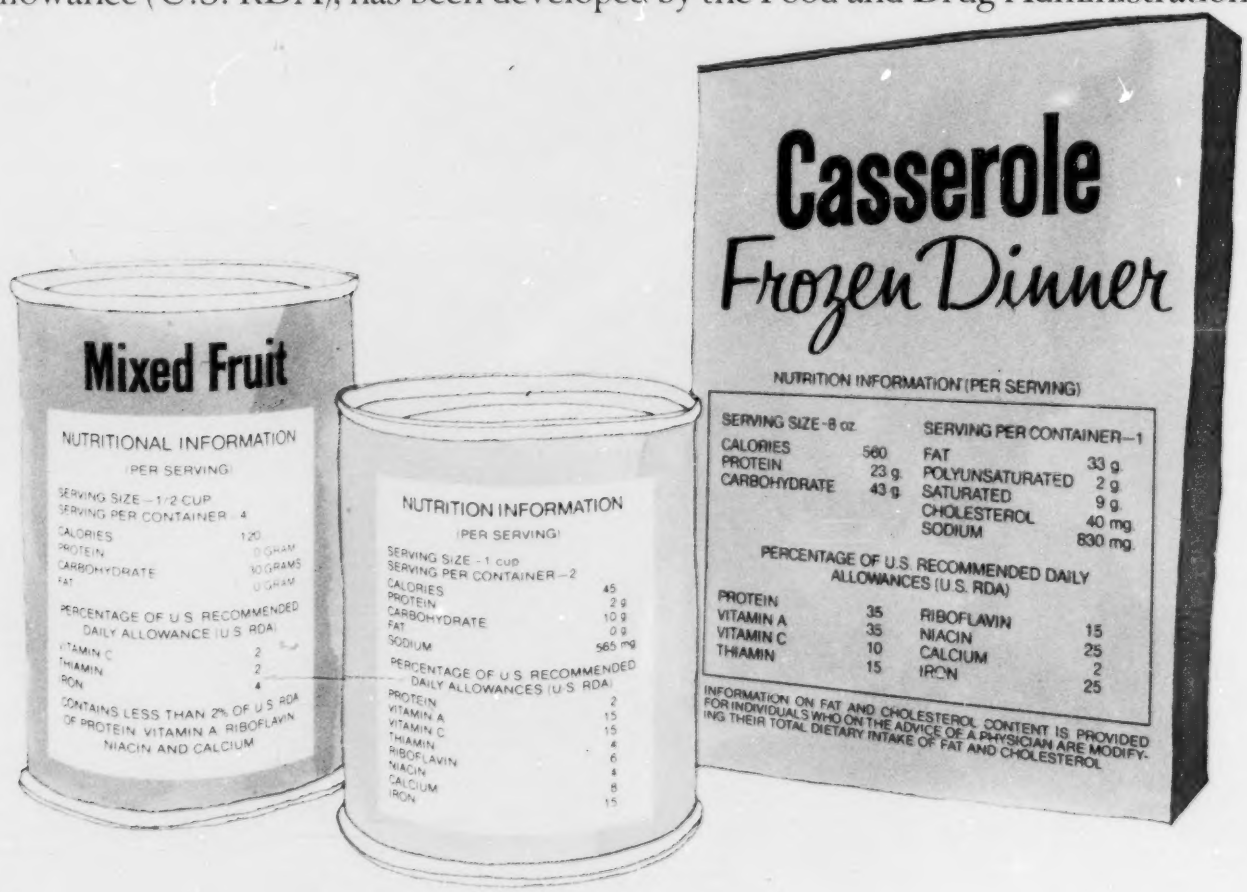
It is one thing to know what nutrients we need; it is another to get them. Of the 8,000 or more items in a large food store today, half or more are packaged foods. Industry and government, therefore, have cooperated to provide for the listing of nutrient content on packaged foods.

This new development, "nutritional labeling," represents a major change in food labeling. Foods with nutritional labeling have a *Nutrition Information* panel on their packages. On the panel the consumer will find the serving size, number of servings in the container, and the calories, protein, carbohydrate and fat per serving.

In addition, the statement gives the percentage of the U.S. Recommended Daily Allowance (U.S. RDA) of protein and seven major vitamins and minerals per serving.

Additional nutrients may be listed. Also, information on sodium, cholesterol and unsaturated fat content may appear.

Nutritional labeling is voluntary except when a nutrient is added or a special nutritional or dietetic claim is made, and then the label *must* provide nutritional labeling. The standard for declaring the nutrients, the U.S. Recommended Daily Allowance (U.S. RDA), has been developed by the Food and Drug Administration



of the Department of Health, Education, and Welfare from the Recommended Daily Dietary Allowance set by the National Academy of Sciences' Food and Nutrition Board. The National Academy has developed twenty-four sets of allowances covering different age groups.

These have been simplified for nutritional labeling and consumer use as the reference standard U.S. RDA. Why nutritional labeling?

Nutritional labeling provides a means of identifying the specific nutrients and the nutrient content of foods. It also provides nutrient information for those new fabricated products which often don't seem to fit into traditional food guides.

Persons interested in weight control or those on special diets for other reasons will find the information helpful in selecting the proper foods.

Nutritional labeling, in conjunction with the traditional methods of selecting a diet of many kinds of foods or a diet based on the basic four food groups, can help the consumer improve and maintain the quality of his diet.

A DAILY FOOD GUIDE

The daily food guide below presents foods in four groups on the basis of their similarity in nutrient content. The four groups are:

the meat group
the vegetable-fruit group
the milk group
the bread-cereal group

MEAT GROUP

FOODS INCLUDED: Beef; veal; lamb; pork; variety meats, such as liver, heart, kidney. Poultry and eggs. Fish and shellfish.

As alternates—dry beans, dry peas, lentils, nuts, peanuts, peanut butter.

AMOUNTS RECOMMENDED: Choose two or more servings every day. Count as a serving: 2 to 3 ounces of lean cooked meat, poultry or fish—all without bone.

One egg, 1/2 cup cooked dry beans, dry peas, or lentils, or 2 tablespoons peanut butter may replace one-half serving of meat.

VEGETABLE-FRUIT GROUP

FOODS INCLUDED: All vegetables and fruits. This guide emphasizes those that are valuable as sources of vitamin C and vitamin A.

Sources of Vitamin C:

Good sources—Grapefruit or grapefruit juice; orange or orange juice; cantaloupe; guava; mango; papaya; fresh strawberries; broccoli; brussels sprouts;

green pepper; sweet red pepper.

Fair sources—honeydew melon; lemon; tangerine or tangerine juice; watermelon; asparagus tips; raw cabbage; collards; garden cress, kale; kohlrabi; mustard greens; potatoes and sweet potatoes cooked in the jacket; spinach; tomatoes or tomato juice; turnip greens.

Sources of Vitamin A:

Dark green and deep yellow vegetables and a few fruits: apricots, broccoli, cantaloupe, carrots, chard, collards, cress, kale, mango, persimmon, pumpkin, spinach, sweet potatoes, turnip greens and other dark green leafy vegetables, winter squash.

AMOUNTS RECOMMENDED:

Choose four or more servings every day, including:

One serving of a good source of vitamin C or two servings of a fair source.

One serving, at least every other day, of a good source of vitamin A. If the food chosen for vitamin C is also a good source of vitamin A, the additional serving of a vitamin A food may be omitted.

The remaining one to three or more servings may be of any vegetable or fruit, including those that are valuable for vitamin C and for vitamin A.

Count as one serving: 1/2 cup of vegetable or fruit; or a portion as ordinarily served, such as 1 medium orange or potato, half a medium grapefruit or cantaloupe, or the juice of one lemon.

MILK GROUP

FOODS INCLUDED: Milk—fluid whole, evaporated, skim, dry, buttermilk.

Cheese—cottage; cream; Cheddar-type, natural or processed. Ice cream. Yogurt.

AMOUNTS RECOMMENDED: Some milk every day for everyone.

Recommended amounts are given below in terms of 8-ounce cups of whole fluid milk:

Children under 9. . . . . 2 to 3	Adults. . . . . 2 or more
Children 9 to 12. . . . . 3 or more	Pregnant women. . . . . 3 or more
Teenagers. . . . . 4 or more	Nursing mothers. . . . . 4 or more

Part or all of the milk may be fluid skim milk, buttermilk, evaporated milk or dry milk.

Other milk products, such as cheese, ice cream or yogurt, may replace part of the milk. The amount it will take to replace a given amount of milk is figured on the basis of calcium content. Common portions of cheese, yogurt and ice cream and their milk equivalents in calcium are:

1-inch cube Cheddar-type cheese	=1/2 cup milk
1/2 cup yogurt	=1/2 cup milk
1/2 cup cottage cheese	=1/3 cup milk
2 tablespoons cream cheese	=1 tablespoon milk
1/2 cup ice cream or ice milk	=1/3 cup milk

BREAD-CEREAL GROUP

FOODS INCLUDED: All breads and cereals that are whole grain, enriched or restored; check labels to be sure.

Specifically, this group includes: breads; cooked cereals; ready to eat cereals; cornmeal; crackers; flour; grits; macaroni and spaghetti; noodles; rice; rolled oats; and quick breads and other baked goods if made with whole-grain or enriched flour.

Bulgur and par-boiled rice and wheat also may be included in this group.

AMOUNTS RECOMMENDED: Choose four servings or more daily. Or, if no cereals are chosen, have an extra serving of breads or baked goods, which will make at least five servings from this group daily.

Count as one serving: 1 slice of bread; 1 ounce ready-to-eat cereal; 1/2 to 3/4 cup cooked cereal, cornmeal, grits, macaroni, noodles, rice, or spaghetti.

OTHER FOODS:

To round out meals and meet energy needs, almost everyone will use some foods not specified in the four food groups. Such foods include: unenriched, refined breads, cereals, flours; sugars; butter, margarine, other fats. These often are ingredients in a recipe or added to other foods during preparation or at the table.

Try to include some vegetable oil among the fats used.

Milk provides protein, riboflavin, vitamin A, and many other nutrients. Cheese and ice cream also supply these nutrients, but in different proportions. When fortified with vitamin D, milk is the major source of this vitamin in the diet.

Meat, poultry, fish and eggs from the meat group are valuable sources of protein, iron and the B vitamins—thiamin, riboflavin and niacin. Dry beans, dry peas and nuts are almost as useful and are usually listed in the meat groups.

The vegetable-fruit group supplies most of the vitamin C and vitamin A in the diet. Concentrate on the dark green and deep yellow fruits and vegetables for their vitamin A value and on citrus fruit and a few others for vitamin C.

A short list cannot do justice to all of the useful sources. Cantaloupe, strawberries and mangoes are also good sources of vitamin C. Nor does a food have to be among the best sources of vitamin C. It is just that it may take more to fill the need.

The bread-cereal group with its whole grains, enriched bread and other cereal products, provides protein, iron, and several vitamins. One ounce of ready-to-eat cereal does about as much as 1/2 to 3/4 cup of cooked cereal product, cornmeal, macaroni, noodles, rice or spaghetti.

Two slices of bread will do the job of one ounce of cereal.

Fats, oils, sugars and sweets are not usually shown on food guides. They are common to every diet, however, and are energy sources. They also make the diet more attractive and acceptable to some people. Some of the fats and oils provide vitamin A and E; some furnish essential fatty acids. Since these foods are apt to be high in calories, they should be used in moderation.

Foods from each group can be part of every meal, but they do not have to be.

Also, some foods fall into several groups, pizza for example.
It is desirable, however, to have the proper number of servings from each of the groups in the course of the day.

The same food guide can work for everyone. The difference is only in the quantity; more of everything for the ravenous teenager, and choices with fewer calories for the dieting adult; more of certain foods for the pregnant woman, and less of these foods for her husband.

Don't neglect breakfast. Many people skip breakfast but scientists have found much evidence that a good breakfast can make a person more alert and productive throughout the morning. And a good breakfast can provide a good start to meeting the daily nutrient needs.

THE VALUE OF PROCESSED FOODS

Fresh or frozen? Canned or dried? Instant or from scratch? Which foods have the nutrients? Which do not? They all do. All foods have their place.

And virtually all food in its place is good food. Some foods are safer to use when they are processed. Some are more appealing when fresh.

Packaged, pasteurized, fortified milk has been around so long no one thinks of it anymore as a processed food, but it is. Because it is pasteurized—or processed—milk is now safe to drink. Unpasteurized milk may carry disease-producing germs.

Whole grain breads and cereals retain the germ and outer layers of grain where the B vitamins concentrate. Milling wheat to white flour refines them out.

Since many people seem to prefer white bread, it is wise to choose the enriched product because of added nutrients.

Brown rice has food value that unenriched polished white rice does not; enriched, parboiled or converted rice retains most, though not all, of the nutrients.

Buy the mix or do it yourself? It is all the same nutritionally if the ingredients

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listed on the label are used in the same amounts and are the same as the ingredients you would use doing it yourself.

Foods in the frozen food case offer as much food value as those in the produce section of the store. It just depends on which foods one prefers and the cost factor.

Any loss of vitamin C in frozen fruits is negligible. The blanching process does, however, reduce slightly the vitamin C and some of the other water-soluble vitamins and minerals in frozen vegetables.

Properly packaged frozen meat, poultry and fish carry the same food value they would if they were purchased directly from the butcher or the fish market.

Fresh or raw foods are not necessarily better than frozen ones. It depends on how they are handled. The vitamin C value of frozen, reconstituted orange juice is the same as the juice squeezed fresh from oranges.

Leafy, dark green vegetables and broccoli packed in crushed ice keep practically all of their vitamin C on their way to market. Left in the refrigerator for 5 days or so they lose about half of it. Cooking will also cause losses.

Although the loss may be great, these vegetables contain large amounts of vitamins and they still provide generous amounts of vitamin C and vitamin A when they are eaten. Raw cabbage, on the other hand, stores well.

It holds its vitamin C well even at room temperature.

Sweet potatoes actually improve in storage. The vitamin A value of sweet potatoes increases during the maturing period before they reach the retail store.

Berries need tender care. They lose their vitamin C in a hurry if they are capped or bruised.

Water-soluble vitamins do just what their name implies: they dissolve in water and if excess water is used in cooking, and then discarded, a loss occurs.

Leftovers and foods cooked ahead of time may save time, but they can have a loss in food value. Cooked vegetables lose about one-fourth of their vitamin C after about a day in the refrigerator.

They lose about one-third after two days. Careful planning is needed if food values are to be protected.

When meat or poultry is stewed, some of the B vitamins end up in the stock, that is, the left-over liquid. With a kettle of stock you are well on your way to a nourishing soup, a flavorful liquid in which to cook rice, or to use as the liquid base for scalloped or creamed dishes.

Cold makes the difference for frozen foods. Most frozen foods should be stored far below the 32 degree freezing point to retain the vitamin C.

Acid foods like orange and tomato juice, however, hold on to their vitamin C tenaciously.

Frozen concentrated orange juice which is kept at only 32 degrees loses only 5 percent of its vitamin C in a year.

This is not true for most other foods. At 0 degrees Fahrenheit, frozen beans, broccoli, cauliflower, and spinach lose one-third to three-fourths of their vitamin C in a year. If you cannot get your freezer to 0 degrees or below, remember that some stored foods will not hold their best nutritive value. It is wise to buy in smaller quantities and not hold them as long.

Other nutrients are not as unstable as vitamin C and so are not as affected by temperatures.

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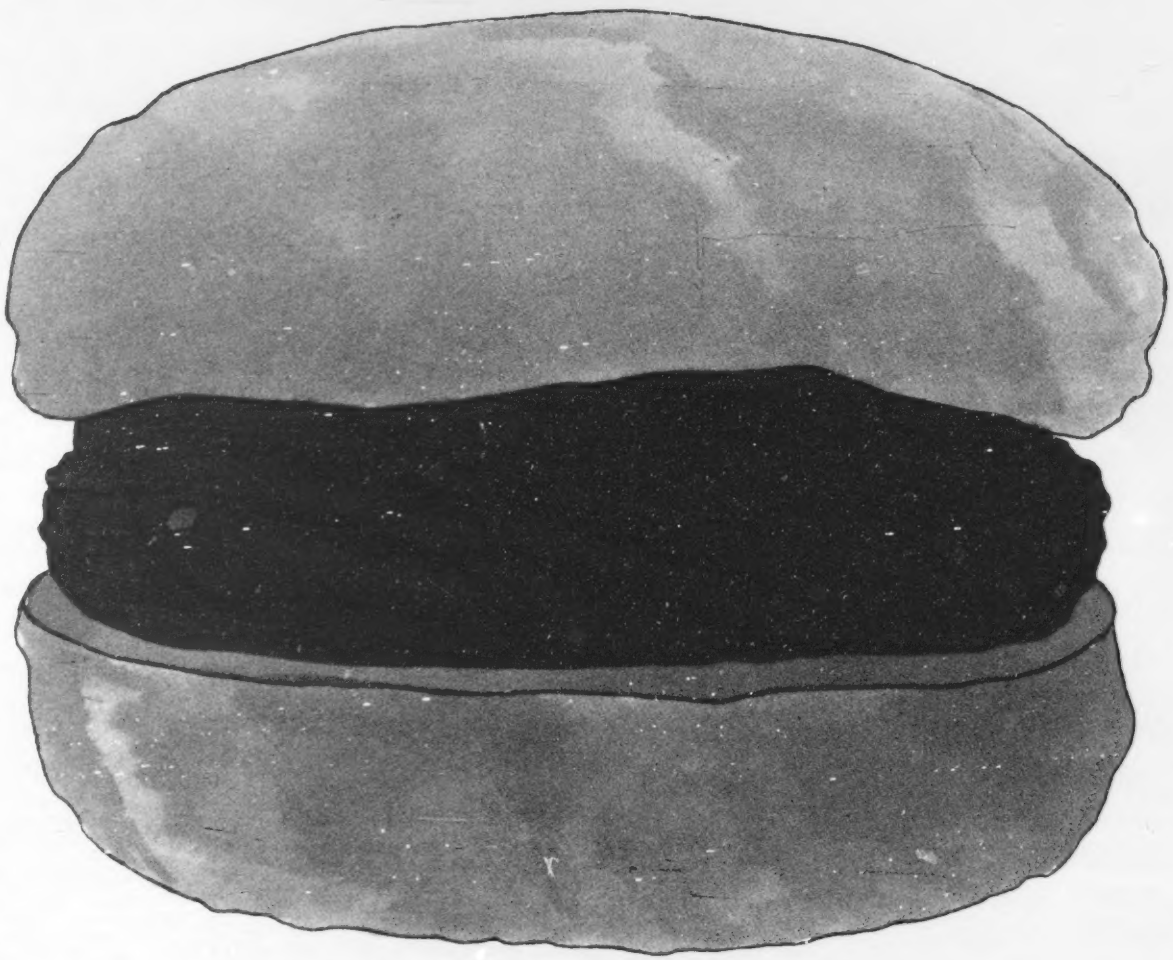

THE MANY WAYS OF EATING

Americans pick and choose their diets from the traditions of the whole world.

Whether it is pumpkin pie or Chinese fried rice, much of our food has a special history and we are the richer for it.

Our food has all sorts of social, geographical and cultural traditions. Baseball and hot dogs, San Francisco and Chinese food, New Orleans and shrimp gumbo, the Southwest and chili are a few of these traditions.

Everyone needs the same nutrients but we can take them as we like them.

Protein is important to us all. If our heritage is Mexican-American, we can get a healthy amount of protein at a low cost in such dishes as refried beans.

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Or iron. Jewish women, like all women, have a special need for iron in their diets. Of the many Jewish foods, one of the most popular is a good source of iron, chopped chicken livers.

Families from Puerto Rico need milk as everyone else does.

They get a fair amount of it in *cafe con leche* or in *flan.* Hankering for soul food, you may find yourself fixing grits and turnip greens—and when you do you are serving up a large portion of iron, vitamin A, B vitamins and vitamin C.

Every cultural tradition allows for enough good food for people to be healthy as well as happy at the dinner table.

Traditional eating patterns and habits may suffer a change on their way to this country, or from farm to city, but the nourishment in the food itself remains the same.

Rice, for example, is a mainstay at Puerto Rican tables; it is just as important when the family moves to New York.

But there are times when the tradition itself changes, catching the homemaker unaware. Older Mexican-Americans like their tortillas made from cornmeal.

Their children often prefer them made from wheat flour, and thus lose out on the calcium that attached itself to the corn in the processing.

For all its people, however, the United States has one of the best food supplies in the world, whether measured in terms of quantity, quality, variety, or availability.

If your diet contains a good variety of foods, whether fresh or packaged, meats and vegetables, milk, cereals and grains, fruits and cheeses in the necessary amounts, good nutrition will take care of itself.